

NAVAL HEALTH RESEARCH CENTER

*KEEPING THE FORWARD SURGICAL
COMPANY IN TOP CONDITION:
EVALUATION OF BIOMEDICAL EQUIPMENT
TEST AND REPAIR AMALS*

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**KEEPING THE FORWARD SURGICAL COMPANY IN TOP CONDITION:
EVALUATION OF BIOMEDICAL EQUIPMENT TEST AND REPAIR AMALS**

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SUMMARY

Problem

Operational Maneuver From The Sea (OMFTS) is a US Marine Corps and Navy doctrinal concept that describes military operations characterized by rapid tempo, momentum, and flexibility. Such operations require a medical support system that can keep pace with the speed and mobility of assault forces. To accomplish this objective, the logistical footprint of the surgical company (SC) must be reduced without compromising the quality of clinical care rendered.

Objective

The test and repair (T&R) function must keep pace with changes to the biomedical equipment in patient care and clinical support areas of the SC. The equipment carried in the battalion aid station, Shock Surgical Team/Triage, acute care ward, operating room, lab, x-ray, pharmacy, and dental blocks determines what is needed for the biomedical equipment T&R blocks. The purpose of evaluating Authorized Medical Allowance List (AMAL) 691–Equipment and AMAL 692–Consumables is to update rather than to streamline them, since T&R must maintain the biomedical equipment contained in other AMALs.

Approach

Basic research methods were applied to the individual line items in AMALs 691 and 692 to determine the function of each item, whether it was current, or whether it was redundant. Manufacturers were contacted when necessary to provide additional information. Subject Matter Experts (SMEs) were recruited from T&R units at Medical Logistics Command, Camp Pendleton, CA; Regional Support Organization, San Diego, CA; Amphibious Group Three, San Diego, CA; Blount Island Command, Jacksonville, FL; and the Biomedical Equipment Technology School, Sheppard Air Force Base, TX. They served as consultants and were available for questions, opinions, and suggestions. Representatives of San Diego area commands met for three SME meetings, where progress was reviewed and recommendations were made.

Results

Analysis of the T&R blocks resulted in recommendations for extensive changes to both AMAL 691 and 692. Unlike previous AMAL reviews, this one did not result in reductions in weight or cube; rather, equipment was updated in response to changes in other AMALs. The proposed changes represent an effort to bring the T&E blocks to a state of operational readiness.

Conclusions

If the T&R blocks are to keep up with changes to the biomedical equipment carried in the SC, the process of updating them must incorporate several improvements. First, the nomenclature for AMALs 691 and 692 should include the end-item equipment National Stock Number so that T&R items are linked, whenever possible, to biomedical equipment items used in other functional areas. Second, Authorized Parts Lists (APLs) should be developed as soon as new biomedical equipment is introduced into other blocks to ensure that spare parts and calibration

tools are available when needed. Third, a database should be developed to link T&R items, APLs, and biomedical equipment electronically so that up-to-date information is readily available on desktop computers.

KEEPING THE FORWARD SURGICAL COMPANY IN TOP CONDITION: EVALUATION OF BIOMEDICAL EQUIPMENT TEST AND REPAIR AMALS

The nature of the US Marine Corps mission is changing. The Operational Maneuver From The Sea (OMFTS) doctrinal concept describes the Marine Corps as a rapid reaction force with a sea-based operational station that allows rapid progress from ship to objective without the shore buildup that characterized previous operations.¹ The OMFTS concept emphasizes rapid tempo, momentum, and flexibility. It requires a medical support system that not only keeps pace with the speed and mobility of assault forces, but also keeps its state-of-the-art medical equipment in top running condition.

It is likely that Marine units will be widely dispersed and highly mobile, with casualties occurring in far-forward positions. Thus, medical support teams must be rapidly deployable and equipped with lighter, more flexible resources. The development of modular, efficient Authorized Medical Allowance Lists (AMALs) is important in achieving the goals of speed and mobility. Therefore, mission-specific standards of care and clinical requirements have been established so that only those items required to maintain the standards of care are transported. To accomplish this objective, the logistical footprint of the surgical company (SC) function has been reduced without compromising the quality of clinical care rendered by forward forces.²

Methodology developed by the Naval Health Research Center (NHRC), San Diego, California, models clinical factors for specific theaters of operation, then determines supplies needed for an identified clinical requirement. NHRC has completed its evaluation of all of the Marine Corps medical supply blocks that are directly involved with patient care, such as the battalion aid station (BAS), Shock Surgical Team/Triage (SST), acute care ward (Ward), and operating room (OR). Clinical support areas, namely, the laboratory, x-ray, and pharmacy facilities, also have been examined. Significant reductions in weight and cube have been achieved in all of these AMALs.²⁻⁶ An evaluation of dental supplies and equipment in the Field Dental Operation block, based on the same methodology, is nearing completion.⁷ This study examines the biomedical equipment test and repair (T&R) AMALs 691 and 692. The purpose of evaluating AMAL 691–Equipment and AMAL 692–Consumables is to update rather than to streamline them, since T&R must be capable of maintaining the biomedical equipment contained in other AMALs.

Headquarters, Marine Corps, Quantico, Virginia, Marine Corps Systems Command (MARCORSYSCOM), and the Joint Readiness Clinical Advisory Board, Fort Detrick, Maryland, have voiced support for the NHRC approach. Consequently, MARCORSYSCOM AMAL management and the Naval Medical Logistics Command, Fort Detrick, have worked to incorporate changes generated by the NHRC model into the

AMAL lists.² It is hoped that through continued cooperation substantial improvement in the AMALs can be achieved.

METHOD

Overview of T&R

The T&R AMALs differ from those of the SC clinical areas. The BAS, OR, SST, Ward, and Dental are directly involved with patient care, and the lab, x-ray, and pharmacy provide clinical support for these functional areas. T&R, however, is the technical component, with responsibility for keeping the medical equipment running properly; as such, it is the only functional area where AMALs are not directly determined by clinical requirements. Instead, the contents of the T&R AMALs must include the parts and tools needed to test, calibrate, and repair field medical equipment. The following review of the NHRC model will help to clarify the interaction between T&R and the other AMALs.

Overview of the NHRC Model

The NHRC model for Echelons I and II was designed to interface with the Echelons III and IV Deployable Medical Systems (DEPMEDS) model,⁸ which consists of relational databases called the Time, Task, Treater files. The DEPMEDS model was developed to standardize medical materiel and to assemble it into sets so that each of the services could configure medical facilities according to its own unique requirements. The data in the DEPMEDS model are based on treatment protocols for 319 patient conditions (PCs) that are identified by a number and include a short description. The numbers range from 1 to 350, with some blank numbers to allow for the addition of new PCs. The PCs represent groupings of closely related diagnoses that are considered to be representative of the injuries expected to occur in theater.⁹ To build upon this existing standard, the structural characteristics of the Echelon I and II NHRC databases are compatible with those of the DEPMEDS Time, Task, Treater files.

The 319 DEPMEDS PCs form the core around which the NHRC Echelon I and II medical supply model was developed. The medical tasks required to treat each PC at Echelon IA—First Responder, Echelon IB—BAS, and Echelon II—Surgical Company were identified, and the tasks were linked to the appropriate supplies needed to carry them out. Finally, panels of subject matter experts (SMEs) validated these PC-Task-Supply relationships.

Consumable AMALs contain disposable items that are linked to medical tasks carried out in specified functional areas. The number of expected cases for each PC determines consumable requirements, therefore, it was necessary to project a casualty stream. The Army's Patient Generating Model (PATGEN),¹⁰ a tool for projecting casualties, was used to determine a 60-day, worst-case operational scenario. Consumables sufficient to treat

the projected number of patients per PC for the length of their stay in a given functional area were calculated.

Equipment AMALs contain the equipment and reusable materiel needed to establish the functional area. To project equipment requirements, each item considered for inclusion in a given AMAL was linked to a known medical task that would be performed in that functional area. For example, items in AMAL 631, the SST equipment AMAL, were linked to tasks that are performed in the SST. Quantities sufficient to provide care to a given number of patients by a predetermined number of providers were calculated.

When new equipment is added or obsolete equipment is removed from an AMAL, the change is reported to T&R, where corresponding changes in T&R AMALs are implemented.

Approach

The field of biomedical equipment technology is highly complex, and many of the items contained in AMALs 691 and 692 are very specialized. Therefore, the first task was enlisting SMEs experienced in T&R at the beginning of the project to serve as consultants. The SMEs represent the following commands:

- Medical Logistics Command, 1st Supply Bn, 1st FSSG, Camp Pendleton, CA
- Regional Support Organization, San Diego, CA
- Amphibious Group 3, San Diego, CA
- Biomedical Equipment Repair School, NSHS, Sheppard AFB, TX
- Blount Island Command, Jacksonville, FL

T&R is responsible for the condition of medical equipment from seven functional areas of the SC, plus Dental. They are:

- 618 – Laboratory
- 627 – X-Ray
- 629 – Pharmacy
- 631 – Shock Surgical Team/Triage
- 633 – Acute Care Ward
- 635 – Battalion Aid Station
- 639 – Operating Room
- 662 – Field Dental Operatory

Combined, these AMALs contain over 500 items. To make this list more manageable, the seven SC AMALs were merged and sorted by National Stock Number (NSN). Duplicates (those items carried in more than one AMAL) were eliminated. Equipment, such as bowls or scissors, that obviously would not be tested, calibrated, or repaired also were removed. Then SMEs examined the list of remaining equipment. They were instructed to

delete additional items that would not be tested, calibrated, or repaired by T&R, resulting in an abbreviated list of about 50 items of current biomedical equipment. The list, seen in Appendix A, served as a guideline for evaluating the contents of AMALs 691 and 692, because T&R must carry the equipment and supplies necessary to maintain this equipment during operations. ADAL 662 (Dental) was considered separately because it carries both consumables and equipment, and because it is currently being evaluated by dental specialists.

Other tasks included ensuring that the end-item NSNs given in the nomenclature of AMALs 691 and 692 matched NSNs of biomedical equipment currently carried in an SC AMAL equipment list or Authorized Dental Allowance List 662. If researchers needed to know more about a specific T&R item, for instance, what it is used for, whether it is still in production, and whether parts and accessories are available, the manufacturer was contacted to obtain the additional information. If the end-item was not known, attempts were made to identify it. Items intended for use with obsolete equipment were deleted. The SMEs' recommendations for additions to the T&R AMALs were researched to find the model that would best meet requirements. Based on these findings, a tentative schedule of changes for AMALs 691 and 692 listed proposed additions and deletions, as well as items to be retained without change.

The introductory SME meeting took place at NHRC, where researchers and four biomedical equipment technicians (BMETs) from San Diego area commands reviewed AMALs 691 and 692 as well as the current equipment list. At this time, T&R items known to be obsolete were deleted. Conversely, items were suggested for addition to the T&R AMALs, based on the experience and knowledge of the SMEs. For example, hydraulic fluid was marked for deletion from AMAL 692 because no current equipment requires it, but general-purpose bearing grease was added because it is needed to maintain several items of equipment. The SMEs also pointed out areas in need of clarification and further research before final recommendations could be made.

A second meeting took place at MEDLOG, Camp Pendleton. AMAL 692 was unpacked and the contents were visually inspected and compared with the proposed schedule of changes. Seeing and handling the consumable items prompted additional changes in the AMAL. For example, solder that was found to contain lead was deleted; also, hardware, such as screws, nuts, and bolts, were found to be packaged in numerous small cellophane bags, and the need for more organized storage was evident. The proposed changes to AMAL 691 were reviewed line by line at this time. Suggested changes and areas for further research were noted, and a second draft of the AMAL 691-692 schedule of changes incorporated these latest recommendations.

Researchers met for the third time with BMETs from MEDLOG, Camp Pendleton, to review the proposed changes to the T&R AMALs. The purpose of this meeting was to proofread the revised AMALs and to make any final additions, deletions, or revisions. Following this meeting, researchers and BMETs from all of the SME commands

communicated by telephone and e-mail to complete the schedule of changes that would form the basis for this report.

RESULTS AND DISCUSSION

The recommended changes to AMALs 691 and 692, unlike those of previous AMAL analyses, did not focus on reducing the weight, cube, or cost of the blocks. For this analysis, emphasis was placed on replacing obsolete equipment, deleting parts for medical equipment that is no longer used, adding new parts and equipment to correspond with changes to the medical equipment blocks, and adding organizational items to make the T&R block more functional.

AMAL 691-Equipment

AMAL 691 carries the tools and apparatus needed to perform testing, measurement, calibration, and diagnostics on biomedical equipment. It carries basic tools as well as highly specialized testing and calibration equipment. Most of the recommended changes to AMAL 691 were driven by two events. First, the North American Drager, Inc. *Narkomed M* anesthesia apparatus was added to the OR, necessitating the additions shown in Table 1. Second, a Field Supply and Maintenance Analysis Office review held at Camp Pendleton recommended acquiring testing equipment with memory and printing

Table 1. Additions to AMAL 691 for Narkomed M Anesthesia Apparatus

| Nomenclature | Part | NSN | Price |
|--|---------|---------------|------------|
| Adapter Assm - Test Terminal | 4104389 | Pending | 15.00 |
| Baromed Pressure Test Fixture | 4108137 | Pending | 29.00 |
| Breathing Bag - 3 Liter | 9995330 | Pending | 79.00 |
| Breathing System Leak Test Device | S010159 | Pending | 150.00 |
| Digital Pressure Manometer (Sensym 200 CD, Bio-Tek DPM2 or Equivalent) | N/A | Pending | 537.00 |
| Dow Corning High Vacuum Grease | 4105908 | Pending | 74.00 |
| Flowmeter Test Stand | S000081 | Pending | 685.00 |
| Fresh Gas Leak Test Device | 4113119 | Pending | 51.00 |
| Fresh Gas O2 Adapter-Assembly | 4110425 | Pending | 426.00 |
| Fresh Gas Outlet Volume Test Device | S010158 | Pending | 25.00 |
| Inspiration Valve Leak Test Device | 4109292 | Pending | Not avail. |
| Pressure Test Assembly W/Adapters | 4114807 | Pending | 450.00 |
| Regulator Test Pressure Gauge | S000063 | Pending | 362.00 |
| Riken Carrying Case | N/A | Pending | 65.00 |
| Riken Gas Indicator Model 18 | N/A | Pending | 2250.00 |
| Scavenger Adapter With Hose Barb | 4108114 | Pending | 27.00 |
| Stopwatch Hour Minute & Second Scale Crown Or Push Piece Control | N/A | 6645011064302 | 5.98 |
| Test Minute Volume Meter Or Equivalent | 2212300 | Pending | Not avail. |
| Spiromed Sensor Lubrication Kit | 2218180 | Pending | 32.00 |

capability to reduce paperwork and error and to improve recordkeeping capabilities. The SMEs recommended an automated biomedical equipment test system, named *medTester 5000C*, from DNI Nevada, Inc. Two of its components, the *Impulse 4000 Defibrillator Analyzer* and the *Cufflink NIBP Simulator* are already under government contract. Although a new non-invasive blood pressure simulator is recommended, the battery-operated electrocardiogram blood pressure calibrator (NSN 6625012060268) has been retained because T&R may be called upon to calibrate equipment from medical units other than the Surgical Company. Table 2 shows the additions and deletions resulting from this recommendation. Some of the items in Tables 1 and 2 do not yet have NSNs, and some prices are unavailable. The proposed AMAL 691 is in Appendix B.

Table 2. Upgrades to Medical Testing Equipment in AMAL 691

| Item | Model | NSN | Cost |
|--|-----------|---------------|--------|
| Items to Be Added | | | |
| MedTester 5000C Base Model | 9519-0248 | Pending | \$2620 |
| Impulse 4000 Defibrillator Analyzer | 9519-0500 | 6515014491420 | \$2681 |
| Cufflink NIBP Simulator | 9519-0502 | 6515014491423 | \$3766 |
| 454A Electrosurgical Analyzer | 9519-0188 | Pending | \$3780 |
| RS-232 Printer Port Module #02 | 9513-0242 | Pending | \$ 495 |
| Memory Module #03 - 100 Records | 9513-0243 | Pending | \$495 |
| Expanded Memory Module #04 | 9513-0244 | Pending | \$495 |
| Waveform & Extended Test Module #05 | 9513-0245 | Pending | \$495 |
| Defib Autosequences Testing Module #08 | 9513-0248 | Pending | \$495 |
| ESU Autosequences Testing Module #11 | 9513-0251 | Pending | \$495 |
| NIBP Autosequences Testing Module #14 | 9513-0254 | Pending | \$495 |
| Interface Cable To PC/454A/Cufflink | 3010-0250 | Pending | \$79 |
| Interface Cable to Impulse 4000 | 3010-0467 | Pending | \$79 |
| Items to Be Replaced | | | |
| Tester Defibrillator Energy | 970066 | 6625004339063 | \$578 |
| Tester Safety Electrical | 2000A | 6625012065999 | \$2141 |

Further recommendations for changes to AMAL 691 include the addition of seven items and the deletion or replacement of three others. These items and the reasons for the suggested change are listed in Table 3.

Table 3. Other Proposed Changes to AMAL 691

| Item | NSN | Cost | Reason |
|---|---------------|------------|---------------------|
| Items to Be Added | | | |
| Digital Logic Probe, Global Specialties Model LTC-5 | Pending | Not Avail. | Efficiency |
| Electric Heater Gun | 4940010287493 | \$70 | For Shrink Wrap |
| Portable Flood Lamp w/ Recharger | 6230013250595 | \$94 | Needed in Field |
| Non-Metallic Crescent Wrench | Pending | Not Avail. | Specialized Repairs |

Table 3. Other Proposed Changes to AMAL 691 (continued)

| Item | NSN | Cost | Reason |
|-------------------------------------|---------------|------------|------------------------|
| Oscilloscope, 100 Mhz Dual Channel | 6625014253856 | \$2545 | Old Model Obsolete |
| Power Supply, Variable | 6130014613510 | Not Avail. | Efficiency |
| Soldering/Desoldering Station | 3439013322340 | \$677 | Safety, Efficiency |
| <i>Items to be Deleted/Replaced</i> | | | |
| Oscilloscope | 6625011223501 | \$3973 | Can't Get Parts, Probe |
| Pneumatic Tire Inflator Gauge | 4910003197506 | \$19 | Not Needed |
| Simpson Analog Multimeter | 6625012692463 | \$210 | Not Needed |

AMAL 692--Consumables

AMAL 692 contains parts and supplies that are used and replenished. In examining this AMAL, it quickly became apparent that many of the items either corresponded to obsolete end items, or were obsolete themselves. These items, shown in Table 4, were removed from the AMAL. Another factor in recommending changes to this AMAL concerned disorganization of the supplies due to the presence of numerous small individual packages, particularly of small hardware items, such as nuts, bolts, and screws. To rectify this situation, compartmented drawers were added to provide organized storage for small items, thus avoiding the time and expense of replacing hundreds of line items. When possible, kits replaced loose items. These recommendations are shown in Table 5. Items such as tape were overstocked, and quantities of these supplies were reduced, as shown in Table 6. The complete proposed AMAL 692 is in Appendix C.

Table 4. Obsolete Items Deleted From AMAL 692

| Nomenclature | NSN | Qty | Cost | Reason |
|---|---------------|-----|--------|-------------------|
| Ball Valve Ported E.I. 6515011858446 Gas Anesthesia Apparatus | 4820013122955 | 1 | \$2 | Obsolete End Item |
| Cam Control Used On Fibrometer Model 60415 | 3040013153713 | 4 | \$352 | Obsolete End Item |
| Clip L.M Holder | 652500L006133 | 24 | \$24 | Unknown |
| Connector Body | 5935010144826 | 10 | \$44 | Obsolete |
| Connector Body | 5935010241902 | 10 | \$19 | Obsolete |
| Connector Body | 5935010901561 | 10 | \$18 | Obsolete |
| Connector Body | 5935011469071 | 10 | \$20 | Obsolete |
| Connector Tubing Branched E.I. 6515-01-185-8446 Gas Anes App | 6515013122958 | 1 | \$33 | Obsolete End Item |
| Diaphragm Gas Anesthesia End Item NSN 6515-01-185- | 6515013126241 | 2 | \$13 | Obsolete End Item |
| Disk Valve End Item 6515011858446 Gas Anesthesia Apparatus | 4820013122971 | 1 | \$27 | Obsolete End Item |
| Disk Valve End Item 6515011858446 Gas Anesthesia Apparatus | 4820013122972 | 2 | \$20 | Obsolete End Item |
| Handcrank Assy Table | 6530014156016 | 1 | \$100 | Unknown |
| Hydraulic Fluid | 9150011313324 | 2 | \$26 | Obsolete |
| Lamp Fluorescent End Item Titration Apparatus | 6240013139608 | 2 | \$48 | Obsolete End Item |
| Lamp Fluorescent End Item Titration Apparatus Laboratory | 6240013139609 | 2 | \$20 | Obsolete End Item |
| Lampholder End Item Light Fantastic II (Appears To Be Obsolete) | 6250013236515 | 4 | \$69 | Obsolete End Item |
| O-Ring .750" H .031" Cross Sect E.I. 6515010034133 Anes App | 5330012481008 | 4 | \$9 | Obsolete End Item |
| Printed Circuit Board E.I. 6640012571944 Centrifuge Laboratory | 5999013125141 | 2 | \$1043 | Obsolete End Item |
| Shield Safety Meter Flow Rate Indicating E.I. NSN 6515011858446 | 6680013122956 | 1 | \$68 | Obsolete End Item |

Table 4. Obsolete Items Deleted From AMAL 692 (continued)

| Nomenclature | NSN | Qty | Cost | Reason |
|--|---------------|-----|--------|-------------------|
| Silicone Compound Silicone W/Corrosion Inhibitor Tube 8 Ounces | 6850008807616 | 6 | \$20 | Obsolete |
| Solder Tin Alloy () | 3439002476931 | 3 | \$53 | Contains Lead |
| Solenoid Electrical End Item Fibrometer Model 60415 | 5945013134813 | 2 | \$228 | Obsolete End Item |
| Tube Bent Gas Anesthesia App End Item NSN 6515-01-185-8446 | 6515013126242 | 1 | \$11 | Obsolete End Item |
| Tube Support Telescoping Assy Light Surg E.I. NSN | 6530013254356 | 1 | \$1029 | Obsolete End Item |
| Wrench Automatic Jet Hypodermic Injection App. Crest-Shape | 6515007539610 | 2 | \$110 | Obsolete End Item |

Table 5. Items Proposed for Addition or Increased Quantities to AMAL 692

| Nomenclature | NSN | Qty | Cost | Reason |
|---|---------------|-----|------------|------------------|
| Items to Be Added | | | | |
| 12-Compartment Drawer (Kar Products Part No. 99034) | Pending | 4 | \$51 | Organization |
| 24-Compartment Drawer (Kar Products Part No. 99008) | Pending | 12 | \$153 | Organization |
| 4-Drawer Roller Rack (Kar Products, Part No. 99114) | Pending | 4 | \$208 | Organization |
| Gear Box Assy | 653000L006138 | 1 | Not avail. | New Part |
| Grease Gp Bearing Grease | Pending | 1 | Not avail. | Basic Supply |
| Hand Crank Assembly Or Table | 653000L006142 | 1 | Not avail. | New Part |
| O2 Sensor/Monitor | Pending | 4 | \$704 | Narkomed M |
| Sleeving Set | 5970010245141 | 1 | \$55 | Organization |
| Tube, Corrugated, 22mmx12in Long (E.I. Anesth App) | Pending | 1 | \$32 | Narkomed M |
| Replacement Bulb For Xray Viewer | 6240001517628 | 2 | Not avail. | Dental |
| Items to Be Increased | | | | |
| Motor, Amalgamator | 593000I006131 | 2 | \$58 | Dental |
| Detector Moisture Content E.I. NSN 6520001391246 | 6635013236641 | 12 | \$11 | Dental |
| Items to Be Replaced | | | | |
| Insulation Sleeving Electrical | 5970008122969 | 6 | \$1 | Replace with kit |
| Insulation Sleeving Electrical | 5970008151295 | 6 | \$1 | Replace with kit |
| Insulation Sleeving Electrical | 5970008428971 | 6 | \$1 | Replace with kit |
| Insulation Sleeving Electrical | 5970009143118 | 6 | \$1 | Replace with kit |

Table 6. Recommended Reductions to Overstocked Items in AMAL 692

| Reduction | NSN | Nomenclature | Cost |
|----------------------|---------------|--|-------|
| Reduce From 12 To 6 | 5640001032254 | Tape Duct Plas Coated Cloth Vapor Proof Alum Or Silver 2" X 60yd | \$14 |
| Reduce From 12 To 6 | 5970004193164 | Tape Insulation Electric | \$9 |
| Reduce From 3 To 1 | 3439002559935 | Flux Soldering Paste 1lb Can | \$5 |
| Reduce from 20 to 10 | 4330013000535 | Bowl Sediment U/O 6520012724531 Dental Operating&Treatment Unit (Dental) | \$180 |

Discussion

The examination of AMALs 691 and 692 revealed some flaws in the process of keeping them current. However, these lapses can be corrected with a few basic steps. First, and

easiest, the AMAL list itself must include the NSNs of the end items in the nomenclature. One of the most difficult phases of this analysis was identifying the purpose of the parts, or connecting them to biomedical equipment. Including this information in the T&R nomenclature from the beginning would solve the problem. Second, the Authorized Parts List (APL) is an important tool used by the Fleet in its AMALs. Development of APLs for the Fleet Marine Force when new biomedical equipment is added to the SC, while initially labor-intensive, would prove valuable in the long run. Third, relational databases, such as Microsoft Access™, could be used to link the AMAL lists to APLs, so that the required parts could be called up simply by selecting either an end item or a T&R item on the computer screen.

The recommendation of adding organizational storage units to AMAL 692 is an example of a way to make the block more user-friendly. Another suggestion that arose during the course of SME meetings was to separate the dental items in T&R so that they are easily accessible. Dental is often deployed at some distance from T&R, or for some reason one or the other is not deployed. Therefore, having the dental items in a separate container would eliminate the need for duplication in Dental and T&R. The items proposed for this “dental can” have been designated by asterisks in Appendices B (AMAL 691—Equipment) and C (AMAL 692—Consumables).

The changes that have been proposed for the T&R AMALs are extensive. However, all recommendations have been made with the goal of achieving and maintaining operational readiness. As the SC improves its clinical capabilities, T&R must keep pace. This can only be accomplished by stocking AMALs 691 and 692 with the state-of-the-art equipment that is necessary to keep the SC in top condition to provide the best patient care during operations.

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APPENDIX A

List of Current Biomedical Equipment in the Surgical Company

Appendix A
List of Current Biomedical Equipment in the Surgical Company

| NSN | Nomenclature | 618 Lab | 627 X-ray | 629 Pharm | 631 SST | 633 Ward | 635 BAS | 639 OR |
|---------------|--|------------|--------------|--------------|------------|-------------|------------|-----------|
| 6630014151593 | Analyzer Blood Pribble Piccolo Point Of Care Whole Blood | x | | | | | | |
| 6630011479532 | Analyzer Carbon Dioxide Hand Operated 304.8 ml Lg 101.6 mmW | x | | | | | | |
| 6630012346794 | Analyzer Centrifugal Hematology 120/220v 50/60hz 216mm Id | x | | | | | | |
| 6630012776342 | Analyzer Clinical Chemistry Kodak Ektachem DT60 Chem Analyzer | x | | | | | | |
| 6630012769462 | Analyzer Module Clin Chemistry Elec Kodak Ektachem DTE Module | x | | | | | | |
| 6515011858446 | Anes App Gas: W/O2 Monitor N2O O2 & Volatile Liq 4 Cy Cap Port | | | | | | | x |
| 6515005842926 | Balance Auto Shutoff Bld Collecting-Dispensing Bag 450ml Cap | x | | | | | | |
| 6515013724470 | Blood & Fluid Warmer 110 Volt 50/60hz Ac 8.3x7x9.5" | | | | | x | | x |
| 6640012831435 | Centrifuge Laboratory 11500 Rpm Electric Dc 9v 8.2x3.4x2.3" | x | | | | | | |
| 6640009309034 | Centrifuge Laboratory 15ml Tu 115v 650/60 Hz 12x13.5in 135 Watts | x | | | | | | |
| 6525013456090 | Chamber X-Ray Film Processing Darkroom Portable | | x | | | | | |
| 6640004188010 | Counter Blood Cells Differential Rest Device Key Quantity 8 | x | | | | | | |
| 6515014593834 | Defibrillator External | | | | x | x | | x |
| 4610009762420 | Demineralizer Water Ion Exchange 115v 60hz Ac 10watts Bench Type | x | | | | | | |
| 6515000000069 | Electrosurgical Apparatus Mobile 115v 50/60hz Or 220v 50hz Ac: | | | | | | | x |
| 6515014553888 | Headlamp Medical-Su | | | | x | x | x | x |
| 6525011608381 | Illuminator Xray Film Fluorescent Illuminated 115v50/60hz Ac | | | | | x | | x |
| 6640012870642 | Incubator Dry Heat 25-115 Deg C Ac 115/120v 50/60hz 38x10cm | x | | | | | | |
| 6515011841235 | Light Head Fiber Optic Adj Spot Coaxial Headlight 5mm Sheath | | | | | | | x |
| 6530013168733 | Light Surgical Field: 110 Volt Ac Or 24 Volt Dc | | | | x | | | x |
| 6650012070829 | Microscope Optical Binocular Histopathological & Pathological | x | | | | | | |
| 6515012796450 | Monitor Oxygen Battery Powered 6.75x3.50" Audible/Visual Alarm | | | | | | | x |
| 6515013156196 | Monitor Patient Vital Signs 120/220v 60hz 8x5x4" Battery/Cord | | | | | x | | x |
| 6515014466766 | Oximeter Pulse Portable Hand-Held 110/220v AC 50/60hz | | | | x | | | |

Appendix A
List of Current Biomedical Equipment in the Surgical Company

| NSN | Nomenclature | 618 Lab | 627 X-ray | 629 Pharm | 631 SST | 633 Ward | 635 BAS | 639 OR |
|---------------|--|------------|--------------|--------------|------------|-------------|------------|-----------|
| 6515012485984 | Oximeter Pulse: 120/230v 50/60hz AC Or Battery Operated | | | | | | | x |
| 6525013862603 | Processing Machine Rad Film Table Top: Compact120/230v50/60hz AC | | x | | | | | |
| 4110001156027 | Refrigerator Mechanical Biologicals 4.5 Cubic Feet 115v 50/60hz | x | | x | x | | | x |
| 4110013889220 | Refrigerator Solid State Bio: | x | | | | | | |
| 6530014572239 | Regulator Oxygen | | | | x | x | x | |
| 6680011746276 | Regulator Pressure Medical Gas Administration Appar Oxygen Sgl | | | | | x | | x |
| 6640011721132 | Rotator Lab Variable Speed 12 X 13 X 6 In 120/230 V 50/60 Hz Ac | x | | | | | | |
| 6530014319005 | Sink Unit Surgical Scrub And Utensil Hospital Field: 110v 60c Ac | x | | | x | x | | x |
| 6515010394884 | Sphygmomanometer Aneroid 300mm Max Calibration W/Clip For Cuff | | | | x | x | x | x |
| 6530009262151 | Sterilizer Surgical Dressing: Pressure Fuel Htd Crs 16x36 In | | | | | | | x |
| 6515012080576 | Stimulator Peripheral Nerve 1x1.50x5.25" Prtble Btry Pwr W/Case | | | | | | | x |
| 6515014350050 | Suction Apparatus Surg Programmable Battery 11-30v Or Ac Prtble | | | | x | x | x | x |
| 6530007098175 | Table Operating Room Field: | | | | | | | x |
| 6515011929456 | Ultrasonic Unit Blood Flow Detection 120/230v 50/60hz Doppler | | | | x | | | |
| 6515012899820 | Vaporizer Anesthesia Drawover: | | | | | | | x |
| 6515011167903 | Ventilator Mobile Volume: | | | | | | | x |
| 6530014551653 | Ventilator Volume Ptbl 8.870x11.5in Uni-Vent 120/220v Ac | | | | | x | | |
| 6525012005800 | X-Ray Apparatus: Low Capacity Port | | x | | | | | * |

*The Narkomed M anesthesia apparatus, NSN 6515-01-1840, has replaced this apparatus.

APPENDIX B

Test and Repair AMAL 691 - Equipment

Appendix B
Test and Repair AMAL 691 - Equipment

| NSN | Nomenclature | Qty | UI | PRICE | UW | UC |
|---------------|---|-----|----|--------|--------|-------|
| 3413001654136 | Drilling Machine Upright: Bench 1/3 Hp 115v 60c 1 Ph 1/2 In Cap | 1 | EA | 582.76 | 195.00 | 17.00 |
| 3439001321331 | Desoldering Tool | 3 | EA | 6.06 | 0.10 | 0.01 |
| 3439005420531 | Soldering Torch Kit | 2 | EA | 17.78 | 0.10 | 0.00 |
| 3439006186623 | Soldering Gun Electric | 3 | EA | 26.57 | 0.10 | 0.00 |
| 3439013322340 | Soldering/Desoldering Station | 1 | EA | 676.58 | 8.1 | 1.91 |
| 3460002211104 | Vise Bench And Machine Table | 2 | EA | 50.45 | 8.00 | 0.11 |
| 4240000523776 | Goggles Industrial Plastic Clear Lens | 3 | PR | 1.84 | 0.31 | 0.05 |
| 4240005422048 | Faceshield Industrial Clear Visor | 3 | EA | 8.37 | 0.25 | 0.50 |
| 4940010287493 | Heater, Gun Type, Electric | 1 | EA | 70.29 | 0.55 | 0.01 |
| 5110002042685 | File Set Hand | 2 | SE | 24.07 | 1.50 | 0.01 |
| 5110002684224 | Stripper, Wire, Hand | 3 | EA | 11.02 | 0.75 | 0.02 |
| 5110002730128 | Shears Metal Cutting Hand 9"Lg | 2 | EA | 6.41 | 1.00 | 0.02 |
| 5110002899657 | Frame Hand Hacksaw Adjusts For 10-12 In Blades | 3 | EA | 3.77 | 0.10 | 0.00 |
| 5110003575593 | Chisel Set Cold Hand | 3 | SE | 11.60 | 7.00 | 0.15 |
| 5110005958316 | File Set Hand | 3 | SE | 36.87 | 7.00 | 0.00 |
| 5120000618543 | Hammer Hand | 1 | EA | 9.72 | 0.10 | 0.00 |
| 5120000812307 | Wrench Set Socket: Sq Drive 1/2 In Drive 12 Pt 3/8 To 1 1/4 In | 1 | SE | 86.50 | 0.10 | 0.00 |
| 5120001129599 | Key Set Socket Head | 3 | SE | 2.03 | 0.10 | 0.00 |
| 5120001487917 | Wrench Set Combination Box And Open End Sizes | 3 | SE | 75.69 | 5.00 | 0.05 |
| 5120001768964 | Vise Printed Circuit Board Sliding Bar Type Rubber Jaws | 2 | EA | 83.51 | 5.00 | 0.25 |
| 5120001800681 | Vise Machinists: Swivel Base Stationary Jaw Optl Jaw Width/Open | 1 | EA | 67.51 | 32.00 | 0.50 |
| 5120002036431 | Clamp,C - 6" | 4 | EA | 17.37 | 10.00 | 0.25 |
| 5120002036439 | Clamp,C - 2.5" | 4 | EA | 3.51 | 0.10 | 0.01 |
| 5120002249453 | Puller Fuse | 3 | EA | 1.65 | 0.25 | 0.10 |
| 5120002420762 | BA Wrecking Crow Ag13 Gooseneck 36" L Any Acceptable Width | 2 | EA | 4.86 | 7.00 | 0.39 |
| 5120002643795 | Wrench Open End 6 Inch | 3 | EA | 6.87 | 0.10 | 0.00 |
| 5120002643796 | Wrench Adjustable Steel/Chromium 12in Overall Length | 2 | EA | 11.63 | 1.58 | 0.03 |
| 5120002771483 | Wrench Pipe Adjustable Heavy Duty 6 In Lg 1/2 In Capacity | 3 | EA | 8.48 | 2.60 | 0.05 |
| 5120002771485 | Wrench Pipe Adjustable Heavy Duty 10" .250 To 1.0" Capacity | 3 | EA | 11.25 | 0.10 | 0.00 |
| 5120002780325 | Screw Starter, Hand | 3 | EA | 2.33 | 0.25 | 0.05 |
| 5120002780327 | Screw Starter, Hand | 3 | EA | 2.78 | 0.60 | 0.06 |
| 5120002930019 | Bender Set Tube Hand | 1 | SE | 5.90 | 5.00 | 0.75 |

Appendix B
Test and Repair AMAL 691 - Equipment

| NSN | Nomenclature | Qty | UI | PRICE | UW | UC |
|---------------|--|-----|----|--------|-------|------|
| 5120002933399 | Mallet Rubber | 1 | EA | 7.75 | 38.40 | 3.00 |
| 5120003226231 | Wrench Set Socket Mechanic Chrome Plated 3/8 In Square Drive | 3 | SE | 105.59 | 4.00 | 0.11 |
| 5120004941911 | Wrench Plier Curved Jaw With Cutter 8 1/2 In Lg | 3 | EA | 7.72 | 1.20 | 0.01 |
| 5120005373375 | Pliers Slip Joint 7.625" Lg | 3 | EA | 7.43 | 0.80 | 0.06 |
| 5120005959305 | Puller Mechanical | 1 | EA | 34.46 | 0.10 | 0.04 |
| 5120006795655 | Calking Gun 8.5" Cartridge Length 2" Diameter | 1 | EA | 4.16 | 2.40 | 0.48 |
| 5120007561156 | Pliers Hand | 3 | EA | 9.79 | 10.50 | 0.03 |
| 5120008506313 | Retrieving Tool | 3 | EA | 3.25 | 5.60 | 0.10 |
| 5120008833003 | Punch Set, Drive Pin | 3 | SE | 9.65 | 1.00 | 0.03 |
| 5120008891796 | Tacker Staple Gun Accommodates Strips Of 84 Flattop Staples | 1 | EA | 15.55 | 2.00 | 0.10 |
| 5120009006113 | Hammer, Hand | 3 | EA | 9.79 | 1.00 | 0.10 |
| 5120009282036 | Pliers | 3 | EA | 33.69 | 0.25 | 0.25 |
| 5120009354641 | Key Set Socket Head | 2 | SE | 11.92 | 72.00 | 9.22 |
| 5120009357315 | Wrench Set Socket | 1 | SE | 111.30 | 8.00 | 0.20 |
| 5120009498368 | Alignment Set | 1 | SE | 20.06 | 0.10 | 0.00 |
| 5120009650604 | Wrench Plier W/O Attachments | 3 | EA | 7.11 | 0.10 | 0.00 |
| 5120010464979 | Wrench Set Combination Box And Open End 14s | 1 | SE | 164.69 | 3.00 | 0.25 |
| 5120012894310 | Riveter Blind Hand Stra Rivet Sz Stdnd 114 Sz Nos 42,44,54,&64 | 3 | EA | 22.98 | 0.10 | 0.00 |
| 5130002931849 | Drill Electric Portable: 1/2 In Nom Size Hdy St Drive | 1 | EA | 112.29 | 5.00 | 0.28 |
| 5130005968404 | Etcher, Electric | 1 | EA | 17.84 | 0.50 | 0.25 |
| 5130009357354 | Drill Electric Portable Voltage Rating 120 Volts 60 Hz | 1 | EA | 68.17 | 0.10 | 0.00 |
| 5130010146856 | Rotary Tool Kit Elec 30 Components Case Manual Accessory List | 1 | EA | 49.60 | 45.00 | 1.42 |
| 5133002930983 | Drill Set Twist: Hss St Rd Shank RH Cut W/Case | 3 | SE | 30.40 | 0.10 | 0.00 |
| 5140003195079 | Tool Box Portable | 3 | EA | 81.66 | 31.00 | 1.60 |
| 5180005961038 | Cutter And Flaring Tool Kit | 1 | KT | 63.38 | 4.00 | 0.40 |
| 5180008563471 | Threading Set Screw Adjustable Die Stock And Handle Tap Wrench | 1 | KT | 61.71 | 0.00 | 0.00 |
| 5180010464980 | Tool Kit, Electronic | 3 | KT | 315.32 | 30.00 | 2.00 |
| 5210002037763 | Gage Screw Pitch Encased Blade | 1 | EA | 18.27 | 0.10 | 0.01 |
| 5210002211991 | Gage Screw Pitch | 1 | EA | 16.46 | 0.80 | 0.02 |
| 5210002933505 | Tape Measuring 10 Feet | 3 | EA | 3.74 | 3.00 | 0.06 |
| 5440000618900 | Stepladder Fiberglass 6ft | 1 | EA | 88.50 | 41.00 | 0.60 |
| 5975011624448 | Outlet Box 6 Place 120 Volt 50/60 Hz Ac | 3 | EA | 362.21 | 5.50 | 0.18 |

Appendix B
Test and Repair AMAL 691 - Equipment

| NSN | Nomenclature | Qty | UI | PRICE | UW | UC |
|---------------|--|-----|----|------------|------------|------------|
| 6130014613510 | Power Supply, Variable | 1 | EA | Not Avail. | Not Avail. | Not Avail. |
| 6150001440091 | Cable Assembly Power | 6 | EA | 9.82 | 2.40 | 0.13 |
| 6230011760191 | Flashlight | 3 | EA | 2.93 | 0.55 | 0.12 |
| 6230013250595 | Lantern Battery Operated Rechargeable With 110V Recharger | 1 | EA | 93.86 | 0.01 | 0.85 |
| 6515014491420 | Analyzer Defibrillator EKG Transcutaneous Pacemaker Battery Operated | 1 | EA | 2681.32 | 8.50 | 0.21 |
| 6515014491423 | Analyzer Non-Invasive Blood Pressure Adult/Infant/Neonatal | 1 | EA | 3766.14 | 10.00 | 1.00 |
| 6520012422375 | Compressor - Dehydrator Dental Equipment: | 1 | EA | 3268.85 | 160.00 | 10.00 |
| 6530012943297 | Cart Anesthesia 109lb 18x26x35"Enamel Red 5 Pull-Out Gray Drawers | 1 | EA | 186.77 | 20.00 | 1.02 |
| 6625005392009 | Lead, Test | 3 | EA | 2.18 | 0.01 | 0.01 |
| 6625010428213 | Test Set Electrosurgical Apparatus: 115/230v 50-60hz 700watts | 1 | EA | 2060.00 | 15.00 | 0.55 |
| 6625010634303 | Voltmeter Digital | 1 | EA | 850.00 | 8.00 | 0.75 |
| 6625010656949 | Lead, Test | 3 | EA | 2.56 | 0.01 | 0.01 |
| 6625011011766 | Lead Set, Test | 3 | EA | 7.95 | 0.10 | 0.01 |
| 6625012060268 | Calibrator ECG-BP Battery Operated | 1 | EA | 598.80 | 5.50 | 0.75 |
| 6625012139354 | Multimeter (Fluke 77) | 3 | EA | 69.00 | 0.50 | 0.10 |
| 6625013120894 | Cal & Verification Sys: Pribl Bttry Oper Dgnstc X-Ray Sys O/P | 1 | EA | 2460.68 | 5.00 | 0.90 |
| 6625014253856 | Oscilloscope 100 MHz Dual Channel | 1 | EA | 2545.00 | Not Avail. | Not Avail. |
| 6640012078234 | Tachometer Photoelectric Solid State 5-1/8"W X 7-1/2"H X 2-1/2"D | 1 | EA | 453.47 | 20.00 | 4.00 |
| 6645011064302 | Stopwatch Hour Minute & Second Scale Crown Or Push Piece Control | 1 | EA | 5.98 | 0.10 | 0.01 |
| 7105007100210 | Table Folding Legs: Laboratory | 3 | EA | 273.59 | 30.00 | 1.25 |
| 7920002915815 | Brush Wire Scratch D7 Curved Handle | 3 | EA | 1.66 | 0.47 | 0.02 |
| NSN Pending | 454A Electrosurgical Analyzer | 1 | EA | 3780.00 | Not Avail. | Not Avail. |
| NSN Pending | Adapter Assm - Test Terminal | 1 | EA | 15.00 | Not Avail. | Not Avail. |
| NSN Pending | Baromed Pressure Test Fixture (E.I. Anesth App) | 1 | EA | 29.00 | Not Avail. | Not Avail. |
| NSN Pending | Breathing Bag - 3 Liter | 1 | EA | 79.00 | Not Avail. | Not Avail. |
| NSN Pending | Breathing System Leak Test Device (E.I. Anesth App) | 1 | EA | 150.00 | Not Avail. | Not Avail. |
| NSN Pending | Cufflink NIPB Simulator | 1 | EA | 4465.00 | Not Avail. | Not Avail. |
| NSN Pending | Digital Logic Probe (Global Specialties Model LTC-5) | 1 | EA | Not Avail. | Not Avail. | Not Avail. |
| NSN Pending | Digital Pressure Manometer (Sensym 200 CD, Bio-Tek DPM2 Or Equiv.) | 1 | EA | 537.00 | Not Avail. | Not Avail. |
| NSN Pending | Dow Corning High Vacuum Grease (E.I. Anesth App) | 1 | EA | 74.00 | Not Avail. | Not Avail. |
| NSN Pending | Flowmeter Test Stand (E.I. Anesth App) | 1 | EA | 685.00 | Not Avail. | Not Avail. |
| NSN Pending | Fresh Gas Leak Test Device (E.I. Anesth App) | 1 | EA | 51.00 | Not Avail. | Not Avail. |

Appendix B
Test and Repair AMAL 691 - Equipment

| NSN | Nomenclature | Qty | UI | PRICE | UW | UC |
|-------------|--|-----|----|------------|------------|------------|
| NSN Pending | Fresh Gas O2 Adapter-Asm (E.I. Anesth App) | 1 | EA | 426.00 | Not Avail. | Not Avail. |
| NSN Pending | Fresh Gas Outlet Volume Test Device (E.I. Anesth App) | 1 | EA | 25.00 | Not Avail. | Not Avail. |
| NSN Pending | Inspiration Valve Leak Test Device (E.I. Anesth App) | 1 | EA | Not Avail. | Not Avail. | Not Avail. |
| NSN Pending | Interface Cable: Medtester 5000c To PC/454A/Cufflink | 1 | EA | 79.00 | Not Avail. | Not Avail. |
| NSN Pending | Medtester 5000C Defib Autosequences Testing Mod #08 | 1 | EA | 495.00 | Not Avail. | Not Avail. |
| NSN Pending | Medtester 5000C Esu Autosequences Testing Module #11 | 1 | EA | 495.00 | Not Avail. | Not Avail. |
| NSN Pending | Medtester 5000C Memory Module - 100 Records)03 | 1 | EA | 495.00 | Not Avail. | Not Avail. |
| NSN Pending | Medtester 5000C Memory Module - Expanded #04 | 1 | EA | 495.00 | Not Avail. | Not Avail. |
| NSN Pending | Medtester 5000C NIPB Autosequences Testing Module #14 | 1 | EA | 495.00 | Not Avail. | Not Avail. |
| NSN Pending | Medtester 5000C RS-232 Printer Port Module #02 | 1 | EA | 495.00 | Not Avail. | Not Avail. |
| NSN Pending | Medtester 5000C Waveform And Extended Test Module #05 | 1 | EA | 495.00 | Not Avail. | Not Avail. |
| NSN Pending | Non-Metallic Crescent Wrench | 1 | EA | Not Avail. | Not Avail. | Not Avail. |
| NSN Pending | Pressure Test Assembly W/Adapters (E.I. Anesth App) | 1 | EA | 450.00 | Not Avail. | Not Avail. |
| NSN Pending | Regulator Test Pressure Gauge (E.I. Anesth App) | 1 | EA | 362.00 | Not Avail. | Not Avail. |
| NSN Pending | Riken Carrying Case | 1 | EA | 65.00 | Not Avail. | Not Avail. |
| NSN Pending | Riken Gas Indicator Model 18 | 1 | EA | 2250.00 | Not Avail. | Not Avail. |
| NSN Pending | Scavenger Adapter With Hose Barb (E.I. Anesth App) | 1 | EA | 27.00 | Not Avail. | Not Avail. |
| NSN Pending | Spiromed Sensor Lubrication Kit (E.I. Anesth App) | 1 | EA | 32.00 | Not Avail. | Not Avail. |
| NSN Pending | Test Minute Volume Meter Or Equiv. (E.I. Anesth App) | 1 | EA | Not Avail. | Not Avail. | Not Avail. |
| NSN Pending | Tester Safety Electrical Medical Equipment Solid State Digital | 1 | EA | 2620.00 | Not Avail. | Not Avail. |

APPENDIX C

Test and Repair AMAL 692 – Consumables

Appendix C
Test and Repair AMAL 692 - Consumables

| NSN | Nomenclature | Qty | UI | Price | UW | UC |
|---------------|---|-----|----|--------|------|------|
| 01051F2067015 | Medical/Dental Equip Maint Record | 10 | HD | 1.90 | 0.25 | 0.01 |
| 3020014156017 | Gearbox Assembly Table | 1 | EA | 100.00 | 1.5 | 0.40 |
| 3110013517512 | Bearing,Roller,Cyli | 2 | EA | 8.44 | 0.1 | 0.10 |
| 3439004386293 | Solder, Tin Alloy, .01" | 3 | SL | 15.71 | 1 | 0.02 |
| 3439010087580 | Solder Tin Alloy 0.015" Diameter 1/2lb Spool | 6 | SL | 3.72 | 0.5 | 0.01 |
| 4140011866449 | Fan, Tube Axial | 2 | EA | 54.10 | 0.03 | 0.03 |
| 4140012624492 | Impeller Fan Axial E.I. 4110001156027 Refrigerator Biological | 2 | EA | 29.75 | 0.35 | 0.01 |
| 4820013140753 | Regulator Thermostatic Temperature End Item 6665006824765 | 1 | EA | 198.15 | 0.88 | 0.01 |
| 5110002774590 | Blade Hand Hacksaw Steel Blade 18 Teeth Per Inch 12 In Lg 10s | 1 | BD | 5.14 | 5 | 0.08 |
| 5305000685407 | Screw, Cap, Socket Head, 1-1/2" | 100 | EA | 0.13 | 0.1 | 0.10 |
| 5305000685414 | Screw, Cap, Socket Head, 1/2" | 1 | HD | 3.25 | 0.1 | 0.10 |
| 5305000685415 | Screw, Cap, Socket Head, 3/4" | 1 | HD | 4.75 | 0.1 | 0.10 |
| 5305002257774 | Screw, Cap, Socket Head, 1" | 100 | EA | 0.27 | 0.1 | 0.10 |
| 5305006397715 | Setscrew | 100 | EA | 0.22 | 0.01 | 0.01 |
| 5305007176948 | Setscrew, D5 Hexagon, Thread Class 3a | 1 | HD | 7.33 | 0.01 | 0.01 |
| 5305007195339 | Setscrew | 1 | HD | 1.46 | 0.01 | 0.01 |
| 5305007195346 | Screw, Set, No 8-32 | 1 | HD | 4.00 | 0.01 | 0.01 |
| 5305007239387 | Setscrew | 1 | HD | 2.21 | 0.01 | 0.01 |
| 5305007239398 | Setscrew | 100 | EA | 0.21 | 0.01 | 0.01 |
| 5305007245813 | Setscrew | 1 | HD | 8.34 | 0.01 | 0.01 |
| 5305007246798 | Setscrew | 100 | EA | 0.03 | 0.01 | 0.01 |
| 5305009887605 | Screw, Cap, Socket Head, 7/8" | 1 | HD | 7.74 | 0.1 | 0.10 |
| 5305009887609 | Screw, Cap, Socket Head, 3/4" | 100 | EA | 0.13 | 0.1 | 0.10 |
| 5305009887835 | Screw, Cap, Socket Head, 1-1/2" | 100 | EA | 0.50 | 0.1 | 0.10 |
| 5310000636716 | Nut,Plain,Wing | 1 | HD | 13.69 | 0.01 | 0.01 |
| 5310000808495 | Nut,Plain,Wing | 1 | HD | 4.66 | 0.01 | 0.01 |
| 5310001670721 | Washer,Lock | 1 | HD | 0.64 | 0.01 | 0.01 |
| 5310001670801 | Washer,Flat | 1 | HD | 1.67 | 0.01 | 0.01 |
| 5310001670803 | Washer,Flat | 1 | HD | 2.21 | 0.01 | 0.01 |
| 5310001670804 | Washer Flat Crs | 1 | HD | 2.35 | 0.1 | 0.00 |
| 5310001670805 | Washer Flat Crs 0.443 In Diameter | 1 | HD | 8.65 | 0.01 | 0.01 |
| 5310001937577 | Washer,Lock | 1 | HD | 0.42 | 0.01 | 0.01 |

Appendix C
Test and Repair AMAL 692 - Consumables

| NSN | Nomenclature | Qty | UI | Price | UW | UC |
|---------------|--|-----|----|-------|------|------|
| 5310002240747 | Washer, Lock | 1 | HD | 0.58 | 0.01 | 0.01 |
| 5310004005503 | Nut, Plain, Hexagon | 1 | HD | 3.68 | 0.01 | 0.01 |
| 5310005319515 | Washer Flat | 1 | HD | 2.32 | 0.01 | 0.01 |
| 5310005501130 | Washer, Lock | 1 | HD | 0.53 | 0.01 | 0.01 |
| 5310005590070 | Washer, Lock | 1 | HD | 0.48 | 0.01 | 0.01 |
| 5310005765752 | Washer, Lock | 1 | HD | 0.41 | 0.01 | 0.01 |
| 5310005790079 | Washer, Lock | 1 | HD | 0.37 | 0.01 | 0.01 |
| 5310005795554 | Washer, Lock | 1 | HD | 0.33 | 0.01 | 0.01 |
| 5310005957237 | Washer, Lock | 1 | HD | 1.09 | 0.01 | 0.01 |
| 5310007207798 | Nut, Plain, Wing, .6"Wd, .3"Hi, .3"Dia, Unc | 1 | HD | 2.80 | 0.01 | 0.01 |
| 5310007208549 | Nut, Plain, Wing | 1 | HD | 5.09 | 0.01 | 0.01 |
| 5310008551102 | Nut, Plain, Hexagon | 1 | HD | 3.49 | 0.01 | 0.01 |
| 5310009282690 | Washer Lock Steel Comp 302 Overall Passivate Overall | 1 | HD | 0.33 | 0.01 | 0.01 |
| 5310009296395 | Washer, Lock | 1 | HD | 1.11 | 0.01 | 0.01 |
| 5310009338118 | Washer, Lock | 1 | HD | 0.64 | 0.01 | 0.01 |
| 5310009338119 | Washer, Lock | 1 | HD | 0.41 | 0.01 | 0.01 |
| 5310009338120 | Washer, Lock | 1 | HD | 0.70 | 0.01 | 0.01 |
| 5310009338121 | Washer, Lock | 1 | HD | 1.64 | 0.01 | 0.01 |
| 5310009349746 | Nut, Plain, Hexagon | 1 | HD | 0.64 | 0.01 | 0.01 |
| 5310009349762 | Nut, Plain, Hexagon | 1 | HD | 2.27 | 0.01 | 0.01 |
| 5310009349763 | Nut, Plain, Hexagon | 1 | HD | 1.03 | 0.01 | 0.01 |
| 5310009349764 | Nut, Plain, Hexagon | 1 | HD | 3.08 | 0.01 | 0.01 |
| 5310009746623 | Washer, Lock | 1 | HD | 2.80 | 0.01 | 0.01 |
| 5310009847042 | Washer, Lock | 1 | HD | 3.41 | 0.01 | 0.01 |
| 5310010679589 | Washer, Lock | 100 | EA | 0.01 | 0.01 | 0.01 |
| 5315005985916 | Cotter Pin Assortme | 1 | AT | 1.04 | 5 | 0.18 |
| 5325002056552 | Ring, Retaining | 100 | EA | 0.04 | 0.01 | 0.01 |
| 5325002868718 | Ring, Retaining | 100 | EA | 0.09 | 0.01 | 0.01 |
| 5325005433981 | Ring, Retaining | 1 | HD | 2.56 | 0.01 | 0.01 |
| 5325005981138 | Ring, Retaining | 100 | EA | 0.07 | 0.01 | 0.01 |
| 5325005981840 | Ring, Retaining | 100 | EA | 0.06 | 0.01 | 0.01 |
| 5325007250969 | Ring, Retaining | 100 | EA | 0.04 | 0.01 | 0.01 |

Appendix C
Test and Repair AMAL 692 - Consumables

| NSN | Nomenclature | Qty | UI | Price | UW | UC |
|---------------|---|-----|----|-------|-------|------|
| 5325008164238 | Ring,Retaining | 100 | EA | 0.52 | 0.01 | 0.01 |
| 5325008171327 | Ring,Retaining | 100 | EA | 0.07 | 0.01 | 0.01 |
| 5325008273262 | Ring Retaining Passivated .238 Inch Inside Dia | 100 | EA | 0.19 | 0.001 | 0.00 |
| 5325008781908 | Ring,Retaining | 100 | EA | 0.09 | 0.01 | 0.01 |
| 5350002293092 | Cloth,Abrasive | 1 | RO | 22.32 | 1 | 0.10 |
| 5350002293095 | Cloth,Abrasive | 1 | RO | 22.02 | 1 | 0.10 |
| 5365002635907 | Ring, Retaining, Ext., .426 ID | 100 | EA | 0.93 | 0.01 | 0.00 |
| 5365002635915 | Ring, Retaining, Ext., .279 ID | 100 | EA | 0.25 | 0.01 | 0.00 |
| 5365002827120 | Ring, Retaining, Ext., .37 ID | 100 | EA | 0.40 | 0.01 | 0.00 |
| 5365002986564 | Ring, Retaining, Ext., .224 ID | 1 | PG | 5.31 | 0.1 | 0.10 |
| 5365006873379 | Ring, Retaining, Int., .697 ID | 3 | HD | 2.13 | 0.25 | 0.01 |
| 5365007541082 | Ring, Retaining, Int., .831 ID | 300 | EA | 0.04 | 0.001 | 0.00 |
| 5365008047645 | Ring, Retaining, Ext., .461 ID | 100 | EA | 0.57 | 0.001 | 0.00 |
| 5365008049735 | Ring, Retaining, Int., .415 ID | 3 | HD | 2.11 | 0.1 | 0.10 |
| 5365008049743 | Ring, Retaining, Int., .548 ID | 300 | EA | 0.13 | 0.001 | 0.00 |
| 5365008077968 | Ring, Retaining, Int., .763 ID | 300 | EA | 0.04 | 0.001 | 0.00 |
| 5365009231326 | Ring, Retaining, Ext., .181 ID | 100 | EA | 0.21 | 0.01 | 0.00 |
| 5365012352700 | Bushing Machine Thread Plastic 1/2-20 Thrd Sz .590" Overall L | 10 | EA | 4.22 | 0.35 | 0.01 |
| 5905013236486 | Resistor Fixed Composition End Item Electrosurgical Apparatus | 2 | EA | 1.68 | 0.15 | 0.01 |
| 5920000106652 | Fuse Cartridge | 20 | EA | 0.08 | 0.1 | 0.00 |
| 5920000117142 | Fuse Cartridge 125v Ac/Dc 10 Amps Nonrenewable Fusible Element | 20 | EA | 0.08 | 0.1 | 0.00 |
| 5920000432641 | Fuse Cartridge | 20 | EA | 0.19 | 0.1 | 0.00 |
| 5920000504953 | Fuse Cartridge 2a Tube Type Style | 20 | EA | 0.08 | 0.1 | 0.00 |
| 5920001319896 | Fuse Cartridge | 20 | EA | 0.77 | 0.1 | 0.00 |
| 5920001999498 | Fuse Cartridge 2a Tube Type | 20 | EA | 0.12 | 0.1 | 0.00 |
| 5920002276179 | Fuse Cartridge | 20 | EA | 0.12 | 0.1 | 0.00 |
| 5920002287882 | Fuse Cartridge | 20 | EA | 0.12 | 0.1 | 0.00 |
| 5920002433788 | Fuse Cartridge 2a Tube Type 1.250" Overall Length 15 Amps | 20 | EA | 0.20 | 0.1 | 0.01 |
| 5920002804960 | Fuse Cartridge 2a Tube Type 1.219" Length 2 Amps 250v Ac/Dc Max | 20 | EA | 0.07 | 0.1 | 0.00 |
| 5920002808342 | Fuse Cartridge | 20 | EA | 0.08 | 0.1 | 0.00 |
| 5920002808344 | Fuse Cartridge | 20 | EA | 0.12 | 0.1 | 0.00 |
| 5920002809539 | Fuse Cartridge | 20 | EA | 0.27 | 0.1 | 0.00 |

Appendix C
Test and Repair AMAL 692 - Consumables

| NSN | Nomenclature | Qty | UI | Price | UW | UC |
|---------------|--|-----|----|--------|-------|------|
| 5920002846787 | Fuse Cartridge A2 Tube Type 1.25in Lg 0.25 In Diameter | 20 | EA | 0.08 | 0.1 | 0.00 |
| 5920002849220 | Fuse Cartridge 2a Tube Type | 20 | EA | 0.12 | 0.1 | 0.00 |
| 5920002960446 | Fuse Cartridge 2a Tube Type 250v AC/DC Maximum | 20 | EA | 0.08 | 0.1 | 0.00 |
| 5920007752273 | Fuse Cartridge | 20 | EA | 0.30 | 0.1 | 0.00 |
| 5920008754100 | Fuse Holder | 24 | EA | 2.36 | 0.01 | 0.01 |
| 5920001006135 | Fuse, .16 Amp | 5 | EA | 1.00 | 0.001 | 0.00 |
| 5925012953211 | Circuit Breaker E.L. 6515001376511 Electrosurgical Apparatus | 2 | EA | 151.05 | 0.15 | 0.01 |
| 5930000571583 | Switch, Thermostatic | 2 | EA | 136.35 | 1.75 | 0.06 |
| 5930009032170 | Switch, Thermostatic | 2 | EA | 50.47 | 0.02 | 0.02 |
| 5930001006102 | Relay, Compressor (Reefer) | 2 | EA | 25.00 | 0.01 | 0.01 |
| 5930012835526 | Switch Sensitive Used On Centrifuge 6640010689612 | 2 | EA | 5.10 | 0.72 | 0.01 |
| 5930013236499 | Switch Toggle End Item Electrosurgical Apparatus | 1 | EA | 15.83 | 0.55 | 0.01 |
| 5935001488189 | Connector Receptacle Elec 9k Str Shape Duplex White 2-Pole | 6 | EA | 15.15 | 0.02 | 0.00 |
| 5935001488190 | Connector Plug Elec 2.671" H 1.531" O/A Dia 125 Volts 15 Amps | 24 | EA | 8.66 | 0.02 | 0.00 |
| 5935001006108 | Adapter, Active, Electrode | 2 | EA | 38.80 | 0.1 | 0.10 |
| 5935010052323 | Connector Plug Electrical 6c Straight Shape With Clamp | 2 | EA | 3.30 | 0.1 | 0.00 |
| 5940005621829 | Terminal Kit | 3 | KT | 55.46 | 3 | 0.07 |
| 5961001463941 | Transistor | 6 | EA | 1.02 | 0.001 | 0.00 |
| 5961001621819 | Transistor | 6 | EA | 0.61 | 0.001 | 0.00 |
| 5961002789620 | Semi Conductor Device, Diode | 6 | EA | 0.45 | 0.001 | 0.00 |
| 5961003508230 | Transistor | 6 | EA | 0.79 | 0.001 | 0.00 |
| 5961004733162 | Transistor | 6 | EA | 0.47 | 0.001 | 0.00 |
| 5961004733163 | Transistor | 6 | EA | 0.50 | 0.001 | 0.00 |
| 5961005844527 | Semi Conductor Device, Diode | 6 | EA | 0.28 | 0.001 | 0.00 |
| 5961009576865 | Semi Conductor Device, Diode | 6 | EA | 0.68 | 0.001 | 0.00 |
| 5961010437551 | Transistor | 6 | EA | 1.33 | 0.001 | 0.00 |
| 5961010681961 | Transistor | 6 | EA | 1.31 | 0.001 | 0.00 |
| 5961010708942 | Semi Conductor Device, Diode | 6 | EA | 0.35 | 0.001 | 0.00 |
| 5970010245141 | Sleeving Set | 1 | SE | | | |
| 5975000742072 | Strap Tiedown Electrical Components Plus 50lb Minimum Strength | 3 | HD | 0.93 | 0.4 | 0.03 |
| 5975001113208 | Strap Tiedown Electrical Components | 3 | HD | 1.00 | 0.1 | 0.00 |
| 5975002464906 | Bushing, Strain Reli | 50 | EA | 0.04 | 0.01 | 0.00 |

Appendix C
Test and Repair AMAL 692 - Consumables

| NSN | Nomenclature | Qty | UI | Price | UW | UC |
|---------------|---|-----|----|----------|-------|------|
| 5975003516114 | Bushing Strain Reli | 25 | EA | 0.04 | 0.1 | 0.00 |
| 5975001006110 | Transistor, Fbsb178 | 2 | EA | 90.28 | 0.001 | 0.00 |
| 6105002265419 | Motor, Alternating C | 2 | EA | 20.76 | 50 | 2.25 |
| 6145002840630 | Wire Electrical | 1 | SL | 4.41 | 2.2 | 0.04 |
| 6145005482962 | Wire Electrical Stranded Single Conductor | 500 | FT | 0.01 | 3.5 | 0.08 |
| 6210013236563 | Indicator Light End Item Electrosurgical Apparatus | 2 | EA | 8.58 | 0.12 | 0.01 |
| 6210013236564 | Indicator Light End Item Electrosurgical Apparatus | 2 | EA | 0.98 | 0.11 | 0.01 |
| 6240011177150 | Lamp Incandescent A65a Miniature Two Pin Base 20watts 6volts | 20 | EA | 6.06 | 0.02 | 0.00 |
| 6515013236623 | Electrode Electrosurgical Apparatus Ball Electrode Disposable | 12 | EA | 139.44 | 0.1 | 0.00 |
| 6530001006138 | Gear Box Assy | 1 | EA | | | |
| 6530001006139 | Hinge, Slotted OR Table | 1 | EA | 500.00 | 0.1 | 0.20 |
| 6530001006140 | Pawl, Head Rest OR Table | 1 | EA | 200.00 | 0.5 | 0.20 |
| 6530001006141 | Brace Fitting OR Light | 1 | EA | 200.00 | 0.5 | 0.20 |
| 6530001006142 | Hand Crank Assembly Or Table | 1 | EA | | | |
| 6530001006143 | Strap OR Table | 4 | EA | 35.50 | 0.01 | 0.01 |
| 6530001006144 | Thumb Screw OR Table | 24 | EA | 2.00 | 0.01 | 0.01 |
| 6530001006145 | Litter, Cup OR Table | 8 | EA | 110.00 | 0.2 | 0.20 |
| 6530001006146 | Inner Fitting OR Table | 4 | EA | 158.00 | 0.2 | 0.20 |
| 6530001006147 | Outer Fitting OR Table | 4 | EA | 158.00 | 0.2 | 0.20 |
| 6530001006148 | Wrist Let, Support OR Table | 4 | EA | 75.63 | 0.2 | 0.20 |
| 6530001006149 | Strap OR Table | 4 | EA | 48.55 | 0.2 | 0.20 |
| 6530001006150 | Rib OR Light | 3 | EA | 20.00 | 0.1 | 0.10 |
| 6530001006151 | Bracket, Glass Retainer OR Light | 1 | EA | 50.00 | 0.1 | 0.10 |
| 6530001006152 | Stud OR Light | 2 | EA | 48.75 | 0.1 | 0.10 |
| 6530001006154 | Handle, Position Or Table | 4 | EA | 69.34 | 0.2 | 0.20 |
| 6545012567036 | Parts Kit Apparatus X-Ray (End Item 6525-01-244-0194) | 1 | EA | 53189.49 | 100 | 9.98 |
| 6545013576899 | Parts Kit Processing Machine Rad Film Auto E.I. NSN 6525013456089 (Need To Check Further) | 1 | EA | 2108.62 | 7 | 0.01 |
| 6545014133144 | Parts Kit Xray Apparatus Low Capacity Portable E.I.6525012005800 | 1 | EA | 999.99 | 10 | 5.00 |
| 6545014133148 | Parts Kit Xray Apparatus Low Capacity Portable E.I.6525012005800 | 1 | EA | 999.99 | 10 | 5.00 |
| 6640001006162 | Boot Rubber (Centrifuge) | 8 | EA | 1.00 | 0.001 | 0.00 |
| 6640012843119 | Cover Centrifuge W/Gasket F/NSN 6640-01-068-9612 | 2 | EA | 46.51 | 0.1 | 0.00 |

Appendix C
Test and Repair AMAL 692 - Consumables

| NSN | Nomenclature | Qty | UI | Price | UW | UC |
|---------------------|--|-----|----|------------|--------|-------|
| 6685012687046 | Thermometer Self-Indicating Bimetallic Dial 0-50deg C Glass Face | 5 | EA | 70.27 | 0.1 | 0.00 |
| 6685012914391 | Gage Pressure Dial | 3 | EA | 74.22 | 1 | 0.01 |
| 6850009354068 | Leak Detection Fluid 12 4oz Bt | 1 | BX | 24.64 | 1 | 0.00 |
| 8030008893535 | Tape Antiseizing Polytetrafluoro-Ethylene Unfused White1/2x260in | 7 | EA | 0.71 | 1 | 0.01 |
| 8040008339563 | Adhesive Resin Synthetic Silicone Rubber White Paste 5 Oz | 12 | KT | 2.96 | 0.1 | 0.00 |
| 8040009419984 | Adhesive, Rtv Red | 3 | KT | 7.61 | 0.5 | 0.02 |
| 9150002617899 | Penetrating Oil 1 Pt | 2 | PT | 1.34 | 1.2 | 0.05 |
| 9150002618146 | Lubricating Oil,Gen | 8 | OZ | 0.66 | 0.062 | 0.01 |
| NSN Pending | 12-Compartment Drawer (Kar Products Part No. 99034) | 4 | EA | 12.64 | | |
| NSN Pending | 24-Compartment Drawer (Kar Products Part No. 99008) | 12 | EA | 12.73 | | |
| NSN Pending | 4-Drawer Heavy-Duty Roller Rack (Kar Products, Part No. 99114) | 4 | EA | 52.04 | | 3.00 |
| NSN Pending | Grease Gp Bearing Grease | | | | | |
| NSN Pending | O2 Sensor/Monitor (E.I. Anesth App) | 4 | EA | 176.00 | | |
| NSN Pending | Tube, Corrugated, 22mmx12in Long (E.I. Anesth App) | 1 | EA | 32.00 | | |
| Dental Items | | | | | | |
| 43100132236636* | Pneumatic Muffler Exhaust-Intake End Item 6540001391246 | 5 | EA | 3.00 | 1.15 | 0.012 |
| 4720012957199* | Hose Air Duct E.I. 6520001391246 Compressor-Dehydrator Dental | 6 | EA | 9.11 | 1.55 | 0.012 |
| 4720013000515* | Tubing Nonmetallic E.I.6520012724531den Operating &Treatment Unit | 30 | FT | 0.61 | 1.15 | 0.012 |
| 4720013256580* | Tubing Nonmetallic End Item 6520012724531 Dental Operating Unit | 20 | FT | 1.00 | 0.89 | 0.012 |
| 4720013256581* | Tubing Nonmetallic End Item 6520012724531 Dental Operating Unit | 20 | FT | 0.82 | 0.92 | 0.012 |
| 4720013256582* | Tubing Nonmetallic End Item 6520012724531 Dental Operating Unit | 20 | FT | 0.16 | 0.89 | 0.012 |
| 4730012027021* | Clamp, Hose | 10 | EA | 1.00 | 0.01 | 0.01 |
| 4820013236524* | Valve Regulating Fluid Pressure End Item 6540001391246 | 3 | EA | 38.10 | 0.85 | 0.012 |
| 5930001006131* | Motor, Amalgamator | 2 | EA | 29.24 | 3 | 0.25 |
| 5930013236498* | Switch Pressure End Item 6520001391246 Compressor-Dehydrator | 2 | EA | 447.49 | 0.88 | 0.012 |
| 6240001517628* | Replacement Bulb For Xray Viewer? | 2 | EA | Not Avail. | Dental | |
| 6520001006122* | Handpiece, Avs (Dental) | 2 | EA | 50.00 | 0.1 | 0.1 |
| 6520012511878* | Arm Repair Assembly Amalgamator 2" W 4.375in H E.I.6530011490123 | 4 | EA | 21.66 | 0.13 | 0.009 |
| 6520012957503* | Regulator Water Den Operating & Treat Unit E.I. 6520012724531 | 2 | EA | 22.35 | 2.3 | 0.001 |
| 6520013236541* | Jar Cylinder Dental 1/2 Gal Capacity Waste | 2 | EA | 15.43 | 1 | 0.5 |
| 6520013257599* | Reservoir Water Den Operating & Treat Unit Field E.I.6520012724531 | 2 | EA | 75.00 | 1 | 0.4 |
| 6525001006134* | Cone, Long Head, Dental X-Ray | 1 | EA | 100.00 | 2 | 0.5 |

Appendix C
Test and Repair AMAL 692 - Consumables

| NSN | Nomenclature | Qty | UI | Price | UW | UC |
|----------------|---|-----|----|--------|-----|-------|
| 6545013236537* | Kit Field Dental Repair End Item Cage 51840 | 2 | EA | 421.39 | 1.2 | 0.003 |
| 6635013236641* | Detector Moisture Content E.I. NSN 6520001391246 Compressor | 12 | EA | 0.88 | 0.2 | 0.2 |
| 9330001006127* | Tubing, Gray, Plastic, Dental | 20 | FT | 1.00 | 0.1 | 0.1 |

* Items proposed for inclusion in separate can for dental supplies

REPORT DOCUMENTATION PAGE

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14. ABSTRACT (maximum 200 words)

The purpose of evaluating test and repair (T&R) Authorized Medical Allowance List (AMAL) 691—Equipment and AMAL 692—Consumables is to ensure that T&R is capable of maintaining the biomedical equipment contained in other surgical company AMALs. Each line item was researched to determine what it is used for, whether it is current, and whether it is redundant. Subject matter experts were recruited from T&R commands to serve as consultants. They participated in meetings and were available to provide assistance by phone or e-mail. Analysis of the T&R AMALs resulted in recommendations for extensive changes to the contents of AMALs 691 and 692. These changes represent an effort to update the AMALs so that T&R is in a state of operational readiness, capable of performing testing, calibration, and repair of surgical company biomedical equipment. Recommendations for improving the process of updating the T&R AMALs include, (1) adding the National Stock Number of the end-item (the biomedical equipment in other AMALs) to the nomenclature of the T&R AMALs; (2) developing Authorized Parts Lists (APLs) for new biomedical equipment; and (3) developing a database that links T&R items, APLs, and equipment electronically to make information accessible.

15. SUBJECT TERMS

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